Fig.6c: 293T cells were transiently transfected with the indicated plasmids. 24 hours post-transfection, cells were harvested and analyzed by flow cytometry. Apoptosis of GFP-positive cells was analyzed by Annexin-V/PI stain.

Fig. 6d: Western blot analysis of transiently transfected 293T cells 24 hours post-transfection, showing the expression of the appropriate proteins.

Abbreviations: Ap., apoptosis; N. treat, no treatment; treat., treatment; E. vec., empty vector; Ab., antibody.

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Figure 7a-2: Post-vaccination metastatic melanoma cell line over-expresses Livin, rendering the cells resistant to chemotherapy.

- (a) Melanoma cell lines were lysed, normalized for total protein and analyzed for Livin, XIAP and Survivin expression.
- (b) Melanoma cell lines LB33 Mel A1 and B1 were treated with etoposide (15 μg/ml). Apoptosis rate was determined by nuclear morphology, as described.
- (c) Western blot analysis of the Melanoma cell line LB33 Mel A1 and B1 for Livin (upper panel) and PARP cleavage as a marker of apoptosis (lower panel) Abbreviations: Ap., apoptosis; H. po.-treat., hours post-treatment; F.l., full-length.

Figure 8a-c: Livin expression in primary melanoma cells mediates etoposide resistance.

Fig. 8a: Livin, XIAP and Survivin expression was determined in 19 primary cultures of melanoma cells derived from patient's tumors (numbers indicate patient's code).

Fig. 8b: Six samples were selected according to the level of Livin expression (high: 5556, 55112, moderate: 5524, 55164, or undetectable: 5530, 5533). These samples were treated with etoposide (20 μg/ml). Apoptosis rate was determined by nuclear morphology, as described. The data shown are representative of three independent experiments, which were also confirmed by flow cytometry, using sub-G1 assay.